NOISE CONTROL TYPE INTAKE HOSE

CROSS-REFERENCE TO RELATED APPLICATIONS

[001] This application claims priority to Korean Application No. 10-2003-0069566, filed on October 07, 2003, the disclosure of which is incorporated fully herein by reference.

FIELD OF THE INVENTION

[002] Generally, the present invention relates to a noise control intake hose adapted to reduce noise generated from the intake hose of a vehicle intake system.

BACKGROUND OF THE INVENTION

[003] Typically, an intake system of a vehicle is used for purifying air intake into an engine and for dampening intake noise generated from the engine. The intake system is typically constituted by an intake hose, an air filter, and an air duct. However, there is a drawback in the intake hose designed for airflow in that it lacks a noise reducing function.

SUMMARY OF THE INVENTION

[004] An embodiment of the present invention provides an intake hose integrally formed with a noise control device for improving the noise reducing function, thereby increasing the productivity and minimize space in the intake system.

[005] In a preferred embodiment, the noise control type intake hose comprises an intake hose of an intake system for a vehicle. A hose expanding part is formed at a certain portion of the intake hose. An inner cover is formed inside the hose expanding part. A wall is formed for obtaining a sealed area between the hose

expanding part and the inner cover. An inner hose is formed from the inner cover to interconnect the inside of the intake hose and the sealed area.

BRIEF DESCRIPTION OF THE DRAWINGS

[006] For a better understanding of the nature and objects of the present invention, reference should be made to the following detailed description with the accompanying drawings, in which:

[007] FIG. 1 illustrates a structure of a noise control type intake hose according to an embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[008] As shown in FIG. 1, a noise control type intake hose according to an embodiment of the present invention comprises a hose expanding part 22. The hose expanding part 22 expands the hose to a predetermined width at a certain portion of an intake hose 20. An inner cover 24 is formed inside the hose expanding part 22. A wall 26 is formed between the hose expanding part 22 and the inner cover 24 for sealing an inner portion of the hose expanding part 22.

[009] In order for the sealed area formed between the inner cover 24 and the hose expanding part 22 via the wall 26 to interconnect with the inner side of the intake hose 20, an inner hose 28 protrudes out in a prescribed length from a certain portion of the inner cover 24 to face the inner portion of the hose expanding part 22. If the inner hose 28 is extended in length inside the hose expanding part 22, low-frequency noise emitted from the intake hose 20 is reduced. On the other hand, if the length of the inner hose 28 is shortened, high-frequency noise of the intake hose 20 is reduced. Thus, it is

preferable to adjust the length of the inner hose 28 according to the desired frequency to be reduced in relation to the intake hose 20.

[0010] The hose expanding part 22, inner cover 24, wall 26, and inner hose 28 installed in the intake hose 20 are preferably integrally formed by molding. The hose expanding part 22 according to the embodiment of the present invention is formed at a certain portion of the intake hose 20 of the intake system. The inner cover 24 is formed inside the hose expanding part 22. The wall 26 is installed to form a certain sealed area between the hose expanding part 22 and the inner cover 24. The inner hose 28 extends out from the inner cover 24 to form a hole thereto, thereby interconnecting the inner side of the intake hose 20 and the sealed area formed inside the hose expanding part 22.

[0011] The sealed area between the hose expanding part 22 and inner cover 24 functions as a resonator, thereby improving the noise reducing function generated from the intake hose 20. In order to improve the noise reducing function of a low-frequency noise, the inner hose 28 is extended in length, while the inner hose 28 is shortened in length for improving the noise reducing function of a high-frequency noise.

[0012] As apparent from the forgoing, there in an advantage in the present invention in that the intake hose of the intake system for a vehicle extends at a certain portion thereof, and the wall is mounted between the inner side of the expanded hose and an inner cover so as to obtain a sealed area therebetween. An inner hose is also formed for interconnecting the sealed area and the inner side of the intake hose, thereby improving the noise reducing function of the intake hose in a simple structure.

[0013] The present invention may be modified, changed, replaced, or added as long as it is under the gist of the present invention and within the scope of claims.